

TABLE 3.2-3 National Ambient Air Quality Standards, Tennessee State Ambient Air Quality Standards, Maximum Allowable Increments for Prevention of Significant Deterioration, and Highest Background Levels Representative of the ETTP Site

Pollutant ^a	Averaging Time	NAAQS/SAAQS ^b		PSD Increments ^d ($\mu\text{g}/\text{m}^3$)		Highest Background Level	
		Value	Type ^c	Class I	Class II	Concentration ^e	Location (Year)
SO ₂	3 hours	0.50 ppm (1,300 $\mu\text{g}/\text{m}^3$)	S	25	512	0.109 ppm (22%)	Rockwood (1998)
	24 hours	0.14 ppm (365 $\mu\text{g}/\text{m}^3$)	P	5	91	0.031 ppm (22%)	Rockwood (2001)
	Annual	0.03 ppm (80 $\mu\text{g}/\text{m}^3$)	P	2	20	0.003 ppm (10%)	Oak Ridge (2000)
NO ₂	Annual	0.053 ppm (100 $\mu\text{g}/\text{m}^3$)	P, S	2.5	25	0.008 ppm (15%)	Oak Ridge (2000)
CO ^f	1 hour	35 ppm (40 mg/ m^3)	P, S	— ^g	—	11.1 ppm (32%)	Knoxville (1999)
	8 hours	9 ppm (10 mg/ m^3)	P, S	—	—	4.9 ppm (54%)	Knoxville (1997)
O ₃	1 hour	0.12 ppm (235 $\mu\text{g}/\text{m}^3$)	P, S	—	—	0.116 ppm (97%) ^h	Oak Ridge (1999)
	8 hours	0.08 ppm (157 $\mu\text{g}/\text{m}^3$)	P, S	—	—	0.099 ppm (124%) ⁱ	Anderson County (2002)
PM ₁₀	24 hours	150 $\mu\text{g}/\text{m}^3$	P, S	8	30	69.9 $\mu\text{g}/\text{m}^3$ (47%)	ETTP (2000)
	Annual	50 $\mu\text{g}/\text{m}^3$	P, S	4	17	23.2 $\mu\text{g}/\text{m}^3$ (46%)	ETTP (2000)
PM _{2.5}	24 hours	65 $\mu\text{g}/\text{m}^3$	P, S	—	—	50.4 $\mu\text{g}/\text{m}^3$ (78%) ^h	Harriman (2000)
	Annual	15 $\mu\text{g}/\text{m}^3$	P, S	—	—	18.4 $\mu\text{g}/\text{m}^3$ (123%)	Harriman (2000)
Pb	Calendar quarter	1.5 $\mu\text{g}/\text{m}^3$	P, S	—	—	0.0063 $\mu\text{g}/\text{m}^3$ (0.4%)	ETTP (2000)

Footnotes on next page.

TABLE 3.2-3 (Cont.)

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- ^a CO = carbon monoxide; NO₂ = nitrogen dioxide; O₃ = ozone; Pb = lead; PM_{2.5} = particulate matter ≤ 2.5 µm; PM₁₀ = particulate matter ≤ 10 µm; and SO₂ = sulfur dioxide.
 - ^b The SO₂ (3-hour and 24-hour) and CO standards are attained when the stated value is not exceeded more than once per year. The SO₂ (annual), NO₂, and Pb standards are attained when the stated value is not exceeded. The O₃ (1-hour) standard is attained when the stated value is not exceeded more than three times in three years. The O₃ (8-hour) standard is attained when the 3-year average of the annual fourth-highest daily maximum 8-hour average concentration does not exceed the stated value. The PM₁₀ (annual) and PM_{2.5} (annual) standards are attained when the 3-year average of the annual arithmetic means does not exceed the stated value. The PM₁₀ (24-hour) standard is attained when the 3-year average of the 99th percentile values does not exceed the stated value. The PM_{2.5} (24-hour) standard is attained when the 3-year average of the annual 98th percentile values does not exceed the stated value.
 - ^c P = primary standard whose limits were set to protect public health; S = secondary standard whose limits were set to protect public welfare.
 - ^d Class I areas are specifically designated areas in which the degradation of air quality is severely restricted under the Clean Air Act; Class II areas have a somewhat less stringent set of allowable emissions.
 - ^e Values in parentheses are monitored concentrations as a percentage of NAAQS or SAAQS.
 - ^f The NAAQS have a primary standard only; the Tennessee SAAQS, however, have a secondary standard as well.
 - ^g A dash indicates that no standard exists.
 - ^h Second-highest value.
 - ⁱ Fourth-highest value.

Sources: 40 CFR 50; TDEC (1999); 40 CFR 52.21; DOE (2002e); EPA (2003b).